
Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2008; month=3; day=11; hr=16; min=0; sec=10; ms=848;]

Validated By CRFValidator v 1.0.3

Application No: 10650559 Version No: 2.0

Input Set:

Output Set:

Started: 2008-03-11 11:29:08.018

Finished: 2008-03-11 11:29:08.558

Elapsed: 0 hr(s) 0 min(s) 0 sec(s) 540 ms

Total Warnings: 5

Total Errors: 0

No. of SeqIDs Defined: 7

Actual SeqID Count: 7

Error code		Error Description											
W	402	Undefined organism found in <213> in SEQ ID (1)											
W	402	Undefined organism found in <213> in SEQ ID (2)											
W	402	Undefined organism found in <213> in SEQ ID (3)											
W	213	Artificial or Unknown found in <213> in SEQ ID (4)											
W	213	Artificial or Unknown found in <213> in SEQ ID (5)											

SEQUENCE LISTING

<110>	Pritchard, David G. Baker, John R. Schwebke, Jane R. Engler, Jeffrey A.													
<120>	Group B Streptococcal Phage Lysin													
<130>	P66186US01GP													
<140> <141>	10650559 2008-03-11													
<150> <151>	US 60/407,038 2002-08-29													
<160>	7													
<170>	PatentIn version 3.4													
<210> <211> <212> <213>	1 1329 DNA Streptococcus agalactiae bacteriophage B30													
<400>	1 actt atcaagaata taaaagcagg tcaaatggta acgcttatga tattgatggg	60												
tettte	ggtg cacaatgttg ggatggctac gcagattact gtaagtatct aggactgcca	120												
tacgcaa	aact gtacaaatac aggatacgca agggatatat gggagcaacg tcacgaaaat	180												
ggtatct	ttaa actattttga tgaagtggaa gttatgcaag ctggtgatgt tgctattttt	240												
atggtto	gttg acggtgtaac gccttacagt catgtagcaa tttttgacag cgatgcagga	300												
ggcggat	tatg gctggttttt ggggcaaaat caagggggtg ctaacggtgc atacaatctt	360												
gtaaaaa	atcc catattcagc aacttatcca acagccttta gaccaaaaag ctttaaaaac	420												
gctgtta	actg taactgataa taccggttta aataaaggtg attactttat cgatgtatcg	480												
gcttato	caac aagcagattt aacaacgact tgtcagcagg cgggcactac aaaaacgatt	540												
atcaago	gtat ccgagtcaat tgcttggctg tctgacagac atcaacaaca agcaaacaca	600												
agcgaco	ccaa ttggctatta ccactttgga cgttttggcg gtgatagtgc tttagcgcaa	660												
cgggaag	gcag acttattttt gtctaactta ccaagcaaaa aagtatcata cttagtcatt	720												
gactato	gaag attccgcaag cgcagacaag caagctaaca caaatgcagt tattgcattt	780												
atggata	aaaa tegetagege tggatataag eetatttatt acagetataa accatttaeg	840												

cttaataata ttgattatca gaaaattatc gctaagtacc ctaatagcat ttggatagct 900

ggttatccag	actacgaagt	acgaacagag	ccgctgtggg	agttcttccc	ttcaatggat	960
ggtgttcgct	ggtggcagtt	tacaagtgta	ggagtagcag	gtggtttaga	taaaaatatt	1020
gtgttgttag	cagatgatag	tagcaaaatg	gatataccta	aggttgataa	gccacaagaa	1080
cttactttt	atcaaaaact	agctactaac	actaaattag	acaactcaaa	tgtaccttat	1140
tacgaagcaa	ctcttagcac	agactattat	gtagagtcta	agccaaacgc	aagtagcgct	1200
gataaagaat	ttatcaaggc	aggaactcgt	gtaagagttt	atgaaaaagt	gaatggatgg	1260
tcacgcatta	accatccaga	gtcggcgcaa	tgggtagaag	ataactactt	agttaacgca	1320
acagatatg						1329

<210> 2

<211> 443

<212> PRT

<213> Streptococcus agalactiae bacteriophage B30

<300>

<308> GenBank/AY149214

<309> 2003-06-26

<313> (1)..(443)

<400> 2

Met Ala Thr Tyr Gln Glu Tyr Lys Ser Arg Ser Asn Gly Asn Ala Tyr 1 5 10 15

Asp Ile Asp Gly Ser Phe Gly Ala Gln Cys Trp Asp Gly Tyr Ala Asp 20 25 30

Tyr Cys Lys Tyr Leu Gly Leu Pro Tyr Ala Asn Cys Thr Asn Thr Gly 35 40 45

Tyr Ala Arg Asp Ile Trp Glu Gln Arg His Glu Asn Gly Ile Leu Asn 50 55 60

Tyr Phe Asp Glu Val Glu Val Met Gln Ala Gly Asp Val Ala Ile Phe 65 70 75 80

Met Val Val Asp Gly Val Thr Pro Tyr Ser His Val Ala Ile Phe Asp
85 90 95

Ser Asp Ala Gly Gly Gly Tyr Gly Trp Phe Leu Gly Gln Asn Gln Gly 100 105 110

Gly Ala As		Tyr Asn	Leu Val	Lys Ile	Pro Ty		Ala	Thr
Tyr Pro Th	r Ala Phe	Arg Pro 135	=	Phe Lys	Asn Al 140	a Val	Thr	Val
Thr Asp As	n Thr Gly	Leu Asn 150	Lys Gly	Asp Tyr 155	Phe Il	e Asp	Val	Ser 160
Ala Tyr Gl	165			170			175	
Thr Lys Th	180	_	185			190		
Arg His Gl 19 Phe Gly Ar	5		200		20	5		
210	-	215			220			
225 Asp Tyr Gl		230		235				240
Val Ile Al	245 a Phe Met		Ile Ala	250 Ser Ala	Gly Ty	r Lys	255 Pro	Ile
Tyr Tyr Se	260 r Tyr Lys	Pro Phe	265 Thr Leu	Asn Asn	Ile As	270 p Tyr	Gln	Lys
27 Ile Ile Al		Pro Asn	280 Ser Ile	Trp Ile	28 Ala Gl		Pro	Asp
290 Tyr Glu Va	l Arg Thr	295 Glu Pro		Glu Phe	300 Phe Pr	o Ser	Met	Asp
305 Gly Val Ar	g Trp Trp	310 Gln Phe	Thr Ser	315 Val Gly	Val Al	a Gly	Gly	320 Leu
	325			330			335	

Asp Lys Asn Ile Val Leu Leu Ala Asp Asp Ser Ser Lys Met Asp Ile

340 345 350

Pro Lys Val Asp Lys Pro Gln Glu Leu Thr Phe Tyr Gln Lys Leu Ala 355 360 Thr Asn Thr Lys Leu Asp Asn Ser Asn Val Pro Tyr Tyr Glu Ala Thr 375 380 Leu Ser Thr Asp Tyr Tyr Val Glu Ser Lys Pro Asn Ala Ser Ser Ala 385 390 395 400 Asp Lys Glu Phe Ile Lys Ala Gly Thr Arg Val Arg Val Tyr Glu Lys 405 410 415 Val Asn Gly Trp Ser Arg Ile Asn His Pro Glu Ser Ala Gln Trp Val 425 430 420 Glu Asp Asn Tyr Leu Val Asn Ala Thr Asp Met 435 440 <210> 3 <211> 1880 <212> DNA <213> Streptococcus agalactiae bacteriophage B30 <220> <221> stem_loop <222> (66)..(99) <220> <221> stem_loop <222> (1512)..(1539) <300> <308> GenBank/AY149214 <309> 2003-06-26 <313> (1)..(1880) <400> 3 ccacgagcca aaaaaatagg aggggacatg cgagcaatca ctaaaatagc aatggtacta 60 120 gcgatagcaa tcctgtacat accgcttgca gtgattgctt tttttattta tccgatttat ttcctttttg gaaaggagga gtaaatggca acttatcaag aatataaaag caggtcaaat 180 ggtaacgctt atgatattga tgggtctttc ggtgcacaat gttgggatgg ctacgcagat 240

tactgtaagt atctaggact gccatacgca aactgtacaa atacaggata cgcaagggat

300

atatgggagc aacgtcacga aaatggtatc ttaaactatt ttgatgaagt ggaagttatg 360 caagctggtg atgttgctat ttttatggtt gttgacggtg taacgcctta cagtcatgta 420 qcaatttttq acaqcqatqc aqqaqqcqqa tatqqctqqt ttttqqqqca aaatcaaqqq 480 540 ggtgctaacg gtgcatacaa tcttgtaaaa atcccatatt cagcaactta tccaacagcc tttagaccaa aaagctttaa aaacgctgtt actgtaactg ataataccgg tttaaataaa 600 660 ggtgattact ttatcgatgt atcggcttat caacaagcag atttaacaac gacttgtcag caggegggca ctacaaaaac gattatcaag gtatcegagt caattgettg getgtetgac 720 agacatcaac aacaagcaaa cacaagcgac ccaattggct attaccactt tggacgtttt 780 840 ggcggtgata gtgctttagc gcaacgggaa gcagacttat ttttgtctaa cttaccaagc aaaaaaqtat catacttaqt cattgactat qaaqattccq caaqcqcaqa caaqcaaqct 900 aacacaaatg cagttattgc atttatggat aaaatcgcta gcgctggata taagcctatt 960 tattacagct ataaaccatt tacgcttaat aatattgatt atcagaaaat tatcgctaag 1020 1080 taccctaata gcatttggat agctggttat ccagactacg aagtacgaac agagccgctg tgggagttet teeetteaat ggatggtgtt egetggtgge agtttaeaag tgtaggagta 1140 gcaggtggtt tagataaaaa tattgtgttg ttagcagatg atagtagcaa aatggatata 1200 cctaaggttg ataagccaca agaacttact ttttatcaaa aactagctac taacactaaa 1260 ttagacaact caaatgtacc ttattacgaa gcaactctta gcacagacta ttatgtagag 1320 tctaagccaa acgcaagtag cgctgataaa gaatttatca aggcaggaac tcgtgtaaga 1380 gtttatgaaa aagtgaatgg atggtcacgc attaaccatc cagagtcggc gcaatgggta 1440 gaagataact acttagttaa cgcaacagat atgtaaaaat aaacgaaagg aaaagctcct 1500 ttagataaga caaatgccct cgctttgcgg gggctatttt tattgaaata ttgaaatctc 1620 tttataaaaa tagtaaaata gtttcgctat tataaagaaa gttgttatca atgaataatc tagttcttcc tcagaattta aacaaatata acattacgaa aatcgttacc aatttcaata 1680 gattacttgc tttaagtgat aacaggacac ttacagtaga tatgagaaac attgagtttg 1740 1800 atgcaaacat caagtggtta atatgcgaag aaagctcttt aaataaacgt caaaggcaag 1860 ctatgttgta tctagtagat 1880

```
<213> Artificial
<220>
<223> PCR Primer
<400> 4
                                                             35
gcactacata tggcaactta tcaagaatat aaaag
<210> 5
<211> 38
<212> DNA
<213> artificial
<220>
<223> PCR Primer
                                                             38
gtggtgctcg agcatatctg ttgcgttaac taagtagc
<210> 6
<211> 444
<212> PRT
<213> Streptococcus equi
<400> 6
Met Ala Thr Tyr Gln Glu Tyr Lys Ser Arg Ser Asn Gly Asn Ala Tyr
1 5 10 15
Asp Ile Asp Gly Ser Leu Gly Ala Gln Cys Trp Asp Gly Tyr Ala Asp
              25
       20
Tyr Cys Lys Tyr Leu Gly Leu Pro Tyr Ala Asn Cys Thr Asn Thr Gly
    35
              40
Tyr Ala Arg Asp Ile Trp Glu Gln Arg His Lys Asn Gly Ile Leu Asn
   50
           55
Tyr Phe Asp Glu Val Glu Thr Met Gln Ala Gly Asp Val Ala Ile Phe
                                 75
                70
65
Met Val Val Ala Gly Val Thr Pro Tyr Ser His Val Ala Ile Phe Asp
Ser Asp Ala Gly Ser Gly Tyr Gly Trp Phe Leu Gly Gln Asn Gln Gly
```

105

<212> DNA

100

Gly	Ala	Asn 115	Gly	Ala	Tyr	Asn	Leu 120	Val	Lys	Ile	Pro	Tyr 125	Ser	Thr	Thr
Tyr	Pro 130	Thr	Ala	Phe	Arg	Pro 135	Lys	Val	Phe	Lys	Asn 140	Ala	Val	Thr	Val
Ile 145	Gly	Asn	Ile	Gly	Leu 150	Asn	Lys	Gly	Asp	Tyr 155	Phe	Ile	Asp	Val	Ser 160
	Tyr			165					170					175	
	Lys		180		-			185				-	190		-
	His	195					200					205			
	210 Phe					215					220				
225	Tyr				230			_		235					240
Val	Ile	Ala	Phe	245 Met	Asp	Lys	Ile	Ala	250 Asn	Ala	Gly	Tyr	Lys	255 Pro	Val
Tyr	Tyr	Ser	260 Tyr	Lys	Pro	Phe	Thr	265 Leu	Asn	Asn	Ile	Asp	270 Tyr	Gln	Gln
Ile	Ile	275 Ala	Lys	Tyr	Pro		280 Ser	Ile	Trp	Ile		285 Gly	Tyr	Pro	Asp
_	290 Glu	Val	Arg	Thr		295 Pro	Leu	Trp	Glu		300 Phe	Pro	Ser	Met	Asp
305 Gly	Val	Arg	Trp	_	310 Gln	Phe	Thr	Ser		315 Gly	Val	Ala	Gly	_	320 Leu
				325					330					335	

Asp Lys Asn Ile Val Leu Leu Ala Asp Asp Ser Ser Lys Val Asp Ile

340 345 350

Pro Lys Ile Asp Lys Pro Gln Ser Gln Leu Thr Phe Asn Gln Lys Leu 355 360 365

Asp Thr Asn Thr Lys Leu Asp Asn Ser Asn Val Pro Tyr Tyr Glu Ala 370 375 380

Thr Leu Ser Thr Asp Tyr Tyr Val Glu Ser Lys Pro Asn Ala Ser Ser 385 390 395 400

Ala Asp Lys Glu Phe Ile Lys Ala Gly Thr Arg Val Arg Val Tyr Glu 405 410 415

Lys Val Asn Gly Trp Ser Arg Ile Asn Ala Ser Gln Ser Asp Gln Trp 420 425 430

Val Glu Asp Lys Tyr Leu Ser Asn Ala Thr Gln Val 435 440

<210> 7

<211> 444

<212> PRT

<213> Streptococcus pyogenes

<400> 7

Met Ala Thr Tyr Gln Glu Tyr Lys Ser Arg Ser Asn Gly Asn Ala Tyr 1 5 10 15

Asp Ile Asp Gly Ser Leu Gly Ala Gln Cys Trp Asp Gly Tyr Ala Asp 20 25 30

Tyr Cys Lys Tyr Leu Gly Leu Pro Tyr Ala Asn Cys Thr Asn Thr Gly 35 40 45

Tyr Ala Lys Asp Ile Trp Glu Gln Arg His Lys Asn Gly Ile Leu Asn 50 55 60

Tyr Phe Asp Glu Val Glu Thr Met Gln Ala Gly Asp Val Ala Ile Phe 65 70 75 80

Met Val Val Ala Gly Val Thr Pro Tyr Ser His Val Ala Ile Phe Asp 85 90 95

Ser	Asp	Ala	Gly 100	Ser	Gly	Tyr	Gly	Trp 105	Phe	Leu	Gly	Gln	Asn 110	Gln	Gly
Gly	Ala	Asn 115	Gly	Ala	Tyr	Asn	Leu 120	Val	Lys	Ile	Pro	Tyr 125	Ser	Thr	Thr
Tyr	Pro 130	Thr	Ala	Phe	Arg	Pro 135	Lys	Val	Phe	Lys	Asn 140	Ala	Val	Thr	Val
Ile 145	Gly	Asn	Ile	Gly	Leu 150	Asn	Lys	Gly	Asp	Tyr 155	Phe	Ile	Asp	Val	Ser 160
Ala	Tyr	Gln	Gln	Ala 165	Asp	Leu	Thr	Ala	Thr 170	Суз	Gln	Gln	Ala	Gly 175	Thr
Thr	Lys	Thr	Ile 180	Ile	Lys	Val	Ser	Glu 185	Ser	Leu	Ala	Trp	Leu 190	Ser	Asp
Arg	His	Gln 195	Gln	Gln	Ala	Asn	Thr 200	Ser	Asp	Pro	Ile	Gly 205	Tyr	Tyr	His
Phe	Gly 210	Arg	Phe	Gly	Gly	Asp 215	Ser	Asn	Leu	Ala	Gln 220	Arg	Glu	Ala	Asp
Leu 225	Phe	Leu	Ser	Asn	Leu 230	Pro	Thr	Lys	Lys	Val 235	Ser	Tyr	Leu	Val	11e 240
	Tyr			245					250					255	
	Ile		260			_		265				_	270		
	Tyr	275	_	_			280					285	_		
	Ile 290		-	_		295					300		_		
305	Glu	val	ATG	THE	310	PLO	ьeu	ттр	GIU	315	rne	PIO	ser	met	320

Gly Val Arg Trp Trp Gln Phe Thr Ser Val Gly Val Ala Gly Gly Leu 325 330 335 Asp Lys Asn Ile Val Leu Leu Ala Asp Asp Ser Ser Lys Val Asp Ile 340 345 350 Pro Lys Ile Asp Lys Pro Gln Ser Gln Leu Thr Phe Asn Gln Lys Leu 355 360 Asp Thr Asn Thr Lys Leu Asp Asn Ser Asn Val Pro Tyr Tyr Glu Ala 370 375 380 Thr Leu Arg Thr Asp Tyr Tyr Val Glu Ser Lys Pro Asn Ala Ser Ser 385 390 395 400 Ala Asp Lys Glu Phe Ile Lys Ala Gly Thr Arg Val Arg Val Tyr Glu 415 410 405 Lys Val Asn Gly Trp Ser Arg Ile Asn Ala Ser Gln Ser Asp Gln Trp 420 425 430 Val Glu Asp Lys Tyr Leu Ser Asn Ala Thr Gln Val